

CLAIMS

WHAT IS CLAIMED IS:

1. A polypeptide which comprises an amino acid sequence represented by SEQ ID NO:73 or its substantial equivalent thereto, or its amide or ester, or a salt thereof.
2. The polypeptide as claimed in claim 1, which comprises the amino acid sequence represented by SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, or SEQ ID NO:66.
3. The polypeptide as claimed in claim 1, which comprises the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:44, SEQ ID NO:45, or SEQ ID NO:59.
4. A partial peptide of the polypeptide as claimed in claim 1, or its amide or ester, or a salt thereof.
5. A DNA which comprises a DNA having a nucleotide sequence coding for the polypeptide as claimed in claim 1, or the partial peptide as claimed in claim 4.
6. The DNA as claimed in claim 5 which comprises a nucleotide sequence represented by SEQ ID NO:2, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:46, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:60, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, or SEQ ID NO:72.
7. A recombinant vector comprising the DNA as claimed in claim 5.
8. A transformant carrying the DNA as claimed in claim 5 or the recombinant vector as claimed in claim 7.
9. A method for producing the polypeptide as claimed

in claim 1 or the partial peptide as claimed in claim 4, which comprises culturing the transformant as claimed in claim 8.

10. A pharmaceutical composition comprises the polypeptide, its amide or ester as claimed in claim 1, or a pharmaceutically acceptable salt thereof.

11. A pharmaceutical composition containing the partial peptide, its amide ester as claimed in claim 4, or a pharmaceutically acceptable salt thereof.

12. A pharmaceutical composition containing the DNA as claimed in claim 5.

13. The pharmaceutical composition as claimed in claim 10, 11, or 12, which is a pituitary function modulator.

14. The pharmaceutical composition as claimed in claim 10, 11, or 12, which is a central nervous system function modulator.

15. The pharmaceutical composition as claimed in claim 10, 11, or 12, which is a pancreatic function modulator.

16. An antibody against the polypeptide as claimed in claim 1 or against the partial peptide as claimed in claim 4.

17. A screening method for a compound capable of changing the binding activity of the polypeptide as claimed in claim 1 or the partial peptide as claimed in claim 4 with a receptor protein comprising an amino acid sequence represented by SEQ ID NO:21 or its partial peptide or its substantial equivalent thereto, or a salt thereof, which comprises making a comparison between: (i) at least one case where said polypeptide as claimed in claim 1 or the partial peptide as claimed in claim 4 is contacted with a receptor protein comprising an amino acid sequence represented by SEQ ID NO:21 or its partial peptide or its substantial equivalent thereto, or a salt thereof, and (ii) at least one case where said polypeptide as claimed in

claim 1 or the partial peptide as claimed in claim 4 together with a sample to be tested is contacted with the receptor protein comprising an amino acid sequence represented by SEQ ID NO:21 or its partial peptide or its substantial equivalent, or a salt thereof.

18. A kit for screening for a compound capable of changing the binding activity of the polypeptide as claimed in claim 1 or the partial peptide as claimed in claim 4 with a receptor protein comprising an amino acid sequence represented by SEQ ID NO:21 or its partial peptide or its substantial equivalent thereto, or a salt thereof.

19. A compound capable of changing the binding activity of the polypeptide as claimed in claim 1 or the partial peptide as claimed in claim 4 with a receptor protein comprising an amino acid sequence represented by SEQ ID NO:21 or its partial peptide or its substantial equivalent thereto, or a salt thereof, which is obtained by the screening method as claimed in claim 17 or by using the kit for screening as claimed in claim 18.

20. A G protein-coupled receptor protein which recognizes the polypeptide as claimed in claim 1 or the partial peptide as claimed in claim 4 as a ligand, or a salt thereof.

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